

# **Stillaguamish Lead Entity Strategy Synthesis Salmon Recovery Funding Board 4<sup>th</sup> Round Grant Cycle**

## **Introduction**

This document is a synthesis of the strategic elements used to select and prioritize projects in the Stillaguamish watershed. The Stillaguamish – WRIA 5 has been the focus of a great deal of data collection and scientific research into salmonid habitat and life history over the last decade. As a result, there are a number of source documents in the Stillaguamish that may be used in a strategic approach to habitat restoration and protection.<sup>1</sup> Concurrently there has been a rigorous effort to work with local citizens in developing watershed priorities and sound salmon recovery projects.

The Stillaguamish Technical Advisory Group has established technical guidelines, criteria and synthesized data for habitat project development. The strategic approach supports project development by basin stakeholders then uses a set of 16 evaluation criteria to rank the benefit to salmon, certainty of success and socio-economic elements of proposed projects. The Stillaguamish Implementation Review Committee reviews the projects and makes final decisions concerning project priorities.

## **Priority Limiting Factors**

There are many limiting factors worthy of attention in the Stillaguamish Basin. However, the limiting factors most critical for Stillaguamish salmon recovery are:

- Hydrology and sediment transport regimes;
- Side channel and slough access for rearing and refuge;
- Intertidal habitats in the estuary/nearshore;
- Large wood recruitment to channels;
- Riparian vegetation;
- Man-made barriers that obstruct fish migration;
- Water temperature.

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### <sup>1</sup> Selected relevant literature:

- Collins, Brian. 1997. Effects of Land Use on the Stillaguamish River, Washington, ~1870 to ~1990: Implications for Salmonid Habitat and Water Quality and Their Restoration. Final Report to Project Completion Report to The Tulalip Tribes, Snohomish County Department of Public Works, Stillaguamish Tribe of Indians, and State of Washington Department of Ecology.
- Pess, G.R., B.D. Collins, M. Pollock, T.J. Beechie, S. Grigsby, and A. Haas. 1999. Historic and Current Factors That Limit Coho Salmon (*Oncorhynchus kisutch*) Production in the Stillaguamish River Basin, Washington State: Implications for Salmonid Habitat Protection and Restoration. Prepared for Snohomish County Department of Public Works and the Stillaguamish Tribe.
- Pollock, M. 1997. An Analysis of Current and Historic Riparian Conditions in the Stillaguamish Watershed. Final Report to the Stillaguamish Tribe of Indians by the 10,000 Years Institute. Seattle, WA..
- Snohomish County Public Works Surface Water Management, 2002. Wadable Stream Habitat Survey Preliminary Results for the Year 2001. Everett, WA.
- Snohomish County Public Works Surface Water Management, 2001. Wadable Stream Habitat Survey Preliminary Results for the Year 2000. Everett, WA.
- Stillaguamish Technical Advisory Group. 2000. Technical Assessment and Recommendations for Chinook Salmon Recovery in the Stillaguamish Watershed. Everett, WA.
- Stillaguamish Technical Advisory Group. 2002. Stillaguamish Watershed – WRIA 5 Salmonid Habitat Evaluation, Version 1.02. Everett, WA.
- US Army Corps of Engineers. 2000 Stillaguamish Ecosystem Restoration Feasibility Study – Final Report. Seattle, WA.
- USDA Forest Service. 2000. North Fork Stillaguamish Watershed Analysis. Darrington Ranger District, Mt. Baker-Snoqualmie National Forest. Darrington, WA.
- USDA Forest Service. 1996. Watershed Analysis, South Fork Lower Stillaguamish River/Canyon Creek. Darrington Ranger District, Mt. Baker-Snoqualmie National Forest. Darrington, WA.
- USDA Forest Service. 1995. South Fork Upper Stillaguamish Watershed Analysis. Darrington Ranger District, Mt. Baker-Snoqualmie National Forest. Darrington, WA.
- Washington Department of Ecology (WDOE). 1990. Stillaguamish Watershed Action Plan. Washington State Department of Ecology, Olympia, WA
- Washington State Conservation Commission. 1999. Salmon Habitat Limiting Factors Water Resource Inventory Area 5, Stillaguamish Watershed. Olympia, WA.
- Washington State Department of Natural Resources. 1996. Deer Creek Watershed Analysis, Olympia, WA.

### Priority Elements for Projects

The following principles guide project development in the Stillaguamish and are the essence of the scoring criteria. Projects should:

- Have direct benefits to the abundance, diversity, and distribution of a listed salmonid species.
- Contribute to the restoration of historic watershed function, composition, and biodiversity.
- Provide a broad range of benefits to the aquatic system. Naturally functioning systems should not be modified to provide narrow benefits at the expense of broader ecological benefits.
- Protect and reconnect habitat, restore natural ecosystem processes and have a broad geographic effect.
- Seek to solve the cause of the problem, rather than address symptoms.
- Be designed to have a high chance of success.
- Require limited maintenance and be self-sustaining with minimum human intervention.
- Be cost effective and provide an efficient use of resources given the alternatives.
- Seek to enhance partnerships, education and secondary community benefits.
- Be voluntary for private landowners.
- Emphasize both protection and restoration.

### Habitat Acquisition Priorities

- Acquire sites to restore estuarine wetlands.
- Acquire sites with degraded floodplain or riparian conditions that have potential for restoration of habitat -forming processes.
- Acquire sites with degraded hydrology or sediment conditions that contribute significantly to watershed scale ecosystem limiting factors and have potential for restoration of habitat forming processes.
- Acquire degraded habitat adjacent to stream reaches that support multiple life history stages of depressed salmonid stocks and have potential for restoration of habitat forming processes.
- Acquire intact habitat with significant ecosystem benefits that is threatened by development and lack adequate regulatory protection.
- Acquire intact habitat where the watershed upstream is fully protected.

### Habitat Restoration Priorities

Opportunities to restore habitat features and ecosystem processes are varied and depend on many site-specific parameters. There are always special areas deserving attention that are not necessarily reflected by subbasin conditions. Project development should be based on an analysis of ecosystem process and habitats in the reach, subbasin and watershed. The Stillaguamish Salmonid Habitat Evaluation – Version 1.02 was released in 2002 to give sponsors more comprehensive information on subbasin scale habitat conditions. Based on this document and other current information, the following areas of the watershed exhibit the most degraded habitat and/or ecosystem processes.

- *Sediment and Hydrology*: Tributaries and main rivers upstream of river mile 14 on the North Fork and river mile 15 on the South Fork where current data shows degraded or unsuitable conditions due to chronic slope failures, forest harvest or immature vegetation.
- *Floodplain and Rearing Habitat*: The Lower North and South Forks, and Lower Stillaguamish
- *Wood Recruitment*: Deer and Lower Canyon Creeks.
- *Riparian Function*: All tributaries to and including the Lower Stillaguamish.
- *Estuarine*: All areas of tidal influence with special emphasis on restoring blind tidal channels important to estuary rearing.
- *Instream Passage*: Tributaries to the Lower Stillaguamish including the Lower North Fork.